

US-PAT-NO: 6401079

DOCUMENT-IDENTIFIER: US 6401079 B1

TITLE: System for web-based payroll and benefits administration

----- KWIC -----

Drawing Description Text - DRTX (49):

FIG. 21(a) shows a screen print of an interactive user interface for displaying Employer-defined pay rate types in an embodiment of the present invention.

Drawing Description Text - DRTX (50):

FIG. 21(b) shows a screen print of another view of an interactive user interface for displaying Employer-defined pay rate types in an embodiment of the present invention.

Drawing Description Text - DRTX (51):

FIG. 22 shows a screen print of an interactive user interface for displaying Employer-defined pay scales for particular job classifications in an embodiment of the present invention.

Drawing Description Text - DRTX (68):

FIG. 30(a) shows a screen print of an interactive user interface for displaying pay rate information regarding a particular employee in an embodiment of the present invention.

Drawing Description Text - DRTX (69):

FIG. 30(b) shows a screen print of another view of an interactive user interface for displaying pay rate information regarding a particular employee in an embodiment of the present invention.

Detailed Description Text - DETX (6):

For each Employer, employee data 30 consists of information about the

Employer's employees and/or contractors, including: personal information (e.g., name, employee number, social security number, date of birth, etc.), address information, company contact information (e.g., office, division, department, telephone number, etc.), payroll information (e.g., salary or hourly status, payroll group, exempt status indicators, etc.), **pay rate** information (e.g., salary, hourly rate, overtime rate, etc.), periodic earnings information (e.g., bonuses, commissions, tips, etc.), periodic deductions information (e.g., 401(k), child support, medical plan contributions, etc.), benefit information (e.g., paid time off, insurance, etc.), tax information (e.g., tax type, withholding allowances, etc.), and direct deposit information (e.g., bank name, routing number, account number, etc.). The Employer typically inputs this information into the system, though some information, such as benefit elections, automatic deductions, and direct deposit elections may be input directly by the employees.

Detailed Description Text - DETX (7):

For each Employer, employer data 40 includes information specific to the Employer, including: address information (for headquarters and other locations), structure information (e.g., departments, divisions), bank information (for bank account(s) from which payroll is funded), paid-time-off policies (e.g., vacation time and sick time payment schedules, including calculation and accrual parameters), holiday information (regarding holidays recognized by one or more of Employer's offices), benefit information (regarding standard and custom health plans, insurance plans, etc.), deduction information (regarding shared and matching contributions by Employer for employee benefits), tax information (regarding tax authorities applicable to Employer's payroll), payroll group information (regarding Employer-defined payroll groups), and **pay rate** information (regarding Employer-defined **pay rates**). The Employer typically inputs this information into the system.

Detailed Description Text - DETX (19):

The stored procedure will next retrieve the employee's overtime hours and insert the hours into a calculation area. The overtime hours will be treated differently depending upon how the employee's overtime is calculated: (i) if calculated on a daily basis, the overtime hours will be inserted as negative hours and subtracted from any overtime calculated on a weekly or bi-weekly basis; (ii) if calculated on a weekly basis, the overtime hours (excluding any hours determined on a daily basis) will be inserted as negative hours and subtracted from any overtime calculated on a bi-weekly basis; (iii) if calculated on a bi-weekly basis, the overtime hours (excluding any hours determined on a daily or weekly basis) will be inserted as negative hours. The stored procedure will check that the calculated overtime hours do not exceed

any overtime limits applicable to the employee. Next, the stored procedure will clear out any previously calculated overtime from the employee's timesheet and insert the newly calculated overtime hours; the system will reverse the sign of the overtime hours in order to produce a positive number (for calculation purposes). Finally, using these hours, the employee's pay rate, and the applicable overtime multiplier, the stored procedure will calculate the employee's overtime pay and insert that value into the employee's paycheck.

Detailed Description Text - DETX (26):

Next, the system calculates the employee's income for the pay period 1010. A necessary input to this step is base rate information 1012 regarding the employee (included in employee data 30), which includes the employee's hourly pay rate for the period. This calculation step 1010 includes several sub-calculations for the pay period, such as: (1) calculation of base rate income 1015 (e.g., hourly or salary); (2) calculation of overtime 1016, if applicable, as required by law and applicable custom benefits or agreements; (3) calculation of imputed income 1017, i.e., non-paid income such as domestic-partner benefits, use of company car, per diem in excess of standard amount, life insurance in excess of standard amount, etc., for which there is a corresponding post-tax deduction (the system automatically enters a corresponding deduction so that the employee's gross income does not change); and (4) calculation of extra income 1018, i.e., non-timesheet income such as bonuses, commissions, tips, vacation pay, benefit accrual, etc. Note that traditional stand-alone payroll systems and services do not offer automatic overtime or imputed income calculations, as this invention provides. Some of these sub-calculations require the step of applying rules 1020 from rules data 120. For example, the overtime calculation may require application of Employer-specific overtime rules 120a corresponding to a union bargaining agreement. Other rules may relate to payment calculation 120b, reporting 120c, tax calculation 120d, and legal compliance 120e.

Detailed Description Text - DETX (30):

After the system calculates the employee's taxes and deductions, the system generates the employee's paycheck for validation purposes 1070. The Employer can then view the employee's paycheck and associated raw and summary data online, in order to validate the paycheck 1080. Employee data that will be displayed by the system includes the following: name, identification number (e.g., social security number), pay rate or salary, pay period end date, status indicator regarding whether paycheck was prepaid, earnings broken out by type (e.g., regular, overtime, reimbursement, health benefits, etc.), hours (if applicable) broken out by type (e.g., regular, overtime), total pay amount broken out by type (e.g., regular, overtime, reimbursement, health benefits,

etc.), deduction and tax amounts broken out by type (e.g., FICA, insurance premiums, 401(k), etc.), and a summary for the present and prior paychecks, showing employee's gross earnings, net earnings, and total deductions. If necessary, the Employer can adjust or modify the raw data online and the system

will automatically recalculate the paycheck 1082 and display the revised information. The Employer can also view the raw and summary data in the context of various integrated reports that compare the employee to other employees. The combination of data display, modification, recalculation, and report generation provided by this invention facilitates the Employer's generation of accurate and timely paychecks, making it far less likely that the Employer will miss a payroll date.

Detailed Description Text - DETX (54):

"Job Classifications" table 270 includes information regarding industry-standard job classifications, including classification name and ID(s) of Employer(s) using a particular job classification. This information can be used to create **pay scales** based on tenure of an Employer's employees across different job classifications. Further, this information can be used to create salary surveys across different Employers using industry-standard job classifications. "Servers" table 280 includes information regarding each computer server that is part of the system, including name and domain. "Servers" table 280 also includes related "Database Servers" 281 and "Web Servers" 282 tables. "Database Servers" table 281 includes information regarding each database server that is part of the system, including server name and TCP port. "Web Servers" table 282 includes information regarding each

Internet server that is part of the system, including server name, TCP port, and an indicator regarding whether the server is secure. The system uses the server information to dynamically load balance the system and to move Employers

to different servers in order to optimize system performance or to reallocate system resources when failures occur. The information can also be used to manage servers at Employers' sites.

Detailed Description Text - DETX (72):

"**Pay Rate** Types" table 430 includes information regarding each of Employer's **pay rate** types (e.g., standard pay, overtime, etc.), including: type, adjustment factor (wage multiplier or increment), and an indicator regarding whether overtime can be earned for the **pay rate** type.

Detailed Description Text - DETX (73):

"**Pay Scales**" table 435 includes information regarding each **pay scale** applicable to the job classifications used by Employer, including: job classification ID, effective date, expiration date, minimum-months-service limit, maximum-months-service limit, and **pay scale** wage.

Detailed Description Text - DETX (83):

"Employee Payroll" table 520 includes specific, payroll-related information regarding each employee and/or contractor, including: employee identification number, title, home address, zip code ID, company contact information, division ID, department ID, office ID, payroll group ID, autopay multiplier, payment method, indicator regarding whether paid for holidays, exempt status, default **pay rate**, birth date, hire date, termination date (if applicable), marital status, and sex.

Detailed Description Text - DETX (84):

"**Pay Rates**" table 530 includes **pay rate** information regarding each employee and/or contractor, including: **pay rate** type ID, **pay rate** amount, and job classification ID. If job classification ID is used instead of **pay rate** type ID, then the employee's salary will be derived from "**Pay Scales**" table 435 instead of "**Pay Rate** Types" table 430.

Detailed Description Text - DETX (88):

"Timesheets" table 570 includes information regarding the employee's and/or contractor's timesheets, including: payroll group ID, **pay rate** type ID, date, hours per day, **pay rate** override, earning code ID, paid-time-off ID, indicator regarding whether timesheet approved, indicator regarding whether paid time off accrued, and indicator regarding overtime hours.

Detailed Description Text - DETX (94):

For the selected employee (e.g., "Michael A. Greenspan"), who was selected from "Timesheet Summary" table 4420 on the "Show Timesheet" interface screen

(as shown in FIG. 40(a)) the system executes an SQL call to retrieve the employee's identification number from "Employee Payroll" table 520. Using the employee's identification number as a keyed index, the system retrieves the employee's standard **pay rate** (e.g., \$193.23) from "**Pay Rates**" table 530 (or "**Pay Scales**" table 435 if job classification used). Next, using the employee's identification number as a keyed index, the system retrieves the employee's hours per day for the current pay period for each earnings type (e.g.,

"Regular") from "Timesheets" table 570. The system totals the hours and calculates the amount earned (e.g., \$6,084.60) by multiplying the total hours and employee's pay rate, in order to fill in the "Amount" field. If the employee had earnings of other types (e.g., overtime) during this pay period, the system would calculate and/or retrieve those hours and relevant pay rate type(s) from "Timesheets" table 510 and "Pay Rates" table 530 (or "Pay Scales" table 435 if job classification used), respectively, using a common pay-rate-type keyed index. When the Employer instructs the system to process the particular payroll, the system execute a SQL command to update "Earnings" table 540 with the employee's calculated earnings, using the employee's identification number as a keyed index.

Detailed Description Text - DETX (185):

b. Pay Rate Types

Detailed Description Text - DETX (186):

The "Pay Rate Types" interface, illustrated by FIG. 21(a), is selectable from sub-menu 3885 and enables input and modification of Employer-defined pay rate types. Such pay rate types may include: calculated overtime, double time, non-overtime, standard, time-and-a-half, and unpaid time, or Employer-defined rates, e.g., for high risk jobs. This information is used to calculate employees' income, as performed in step 1010 in FIG. 2.

Detailed Description Text - DETX (187):

The system displays all pay rate types in a selectable list in "Pay Rate Types" field 3890. Clicking on a pay rate type causes the system to display details regarding that rate type. For example, as shown in FIG. 21(a), the selected "Calculated Overtime" rate type adjusts the standard pay rate with a multiplier of 0.50 (as shown in "Multiplier" field 3895); the system allows the Employer to modify the multiplier in this field where permitted by law. Indicators on this interface show that for this pay rate the system will enforce automatic overtime calculation (which can be disabled) and that work at this pay rate is not eligible for additional overtime calculation.

Detailed Description Text - DETX (188):

As shown in FIG. 21(b), the selected "High Risk Job" rate type adjusts the standard pay rate by adding an increment of \$10.00 to the hourly pay rate (as shown in "Increment" field 3915); the Employer can modify the increment in this field. Indicators on this interface show that for this pay rate the system

will enforce automatic overtime calculation (which can be disabled) and that work at this **pay rate** is eligible for additional overtime calculation.

Detailed Description Text - DETX (189):

The Employer can add a **pay rate** type by clicking "Add" button 3900 or delete a **pay rate** type by selecting the rate type and clicking "Delete" button 3905, as shown in FIG. 21(a). The user can refresh the information displayed on this interface by clicking "Refresh" button 3910.

Detailed Description Text - DETX (190):

Note that the system enables Employers to use **pay rate** types for purposes of "job costing," i.e., tracking the internal cost of certain types of work.

Detailed Description Text - DETX (192):

The "Job Classifications" interface, illustrated by FIG. 22, is selectable from sub-menu 3920 and enables input and modification of Employer-defined **pay scales** for particular job classifications. The job classifications may be standard industry classifications or Employer-defined classifications. In an embodiment of this invention, **pay scales** for particular job classifications across an industry can be aggregated from multiple Employers that use the system, in order to create comparative salary survey data that shows typical salaries for particular jobs.

Detailed Description Text - DETX (193):

As shown in FIG. 22, the system displays standard industries in "Industries" pull-down menu 3925. When the user selects a particular industry, for example "Engineering Services," the system displays the standard job classifications within that industry in a selectable list in "Job Classifications" field 3930. The system also displays daily custom job classifications defined by the particular Employer within that industry. Selecting a particular job classification, for example "Junior Engineer" (denoted by the arrow adjacent to the classification), causes the system to display the Employer-defined **pay scale** for that classification, including: effective date, expiration date, and **pay rate** scheduled across periods of service (e.g., 0-12 mos.=\$110/hour; 13-1200 mos.=\$220/hour).

Detailed Description Text - DETX (230):

b. **Pay Rates**

Detailed Description Text - DETX (231):

The "**Pay Rates**" interface, illustrated in FIG. 30(a), enables modification of the **pay rate** types applicable to the selected employee. This information is used to calculate the employee's income, as performed in step 1010 in FIG. 2. The system displays the employee's **pay rate** types in a selectable list in "**Pay Rate** Type" field 4225. For each applicable **pay rate** type, the system displays a status indicator regarding whether the particular **pay rate** is derived from the employee's **pay rate** type or job classification. For example, in FIG. 30(a), in which a "Standard" **pay rate** type is displayed, the "Fix Amount" use indicator 4230 is set with an hourly rate amount of \$193.23. The employee's default **pay rate** type (e.g., "Standard") can be changed in pulldown menu 4235. Clicking "**Pay Rate** Types" button 4240 causes the system to display the previously-described "**Pay Rate** Types" interface, shown in FIGS. 21(a)-(b), which enables the user to view and modify Employer-defined **pay rate** types.

Detailed Description Text - DETX (232):

In FIG. 30(b), the "Job Classification" use indicator is set with job classifications listed in associated pull-down menu 4255. Clicking "Job Classifications" button 4260 causes the system to display the previously-described "Job Classifications" interface, shown in FIG. 22, which enables input and modification of Employer-defined **pay scales** for particular job classifications.

Detailed Description Text - DETX (233):

As shown in FIG. 30(a), the Employer can delete a **pay rate** type from the employee's list by selecting the **pay rate** type in "**Pay Rate** Type" field 4225 and clicking "Delete **Pay Rate**" button 4245. The user can refresh the information displayed on this interface by clicking "Refresh" button 4250.

Detailed Description Text - DETX (279):

This function consists of one user interface which is selectable from navigation bar 4535 in FIG. 39 by clicking on "Payroll Information," which causes the "**Pay Rates**" interface name to be displayed.

Detailed Description Text - DETX (280):

The "**Pay Rates**" interface for contractors is the same as that for employees, as illustrated by FIGS. 30(a)-(b) and previously described. This interface enables modification of the **pay rate** types applicable to the selected

contractor. This information is used to calculate the contractor's income, as performed in step 1010 in FIG. 2.

Detailed Description Text - DETX (295):

As shown in FIG. 40(a), the user can select a particular employee or contractor by clicking on that employee's record in "Timesheet Summary" table 4420. Once the user has selected an employee or contractor, if the user checks "Show Timesheet" indicator 4470, as shown in FIG. 40(b), the system displays "Timesheet Details" table 4475 for the selected employee or contractor for the current payroll, including the following information, broken out by each day of the pay period: weekday and date, earning type (e.g., "Regular"), pay rate type (eg, "High Risk"), override pay rate type (if applicable), hours per day, and any explanatory notes. The displayed information corresponds to timesheet data 1002 collected in step 1000 in FIG. 2.

Detailed Description Text - DETX (300):

Once the user has selected an employee or contraction, if the user checks "Show Paycheck" indicator 4495, as shown in FIG. 40(c), the system displays "Paycheck" table 4500 for the selected employee or contractor for the current payroll, including the following information: name; employee identification number; standard pay rate; pay period end date; status indicator regarding whether the employee's paycheck was prepaid (e.g., if employee terminated/resigned and last day occurred prior to pay date); earnings and hours broken out by pay rate type (e.g., regular, overtime, reimbursement, health benefits, etc.); and deduction amounts broken out by type (e.g., federal income tax, state income tax, FICA, insurance premiums, 401(k) contributions, etc.), including payee name and any deduction override amounts (if applicable). Pull-down menu 4503 enables selection of a payee name for a particular deduction by the Employer or employee (if authorized by the Employer). "Paycheck" table 4500 also includes a summary for the present and prior paychecks, showing: gross earnings, net earnings, total deductions, and, if selected, Employer contributions on behalf of the employee. FIG. 41(c) illustrates an example of such a table for an employee included in an unscheduled payroll.